

AMENDMENTS TO THE CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF THE CLAIMS:

1-13. (Canceled).

14. (Previously Presented) A control unit comprising:

a housing;

a processor situated in the housing; and

at least one inertial sensor situated in the housing,

wherein a data transmission between the processor and the at least one inertial sensor is digital, and

wherein the data transmission is configured in such a way that transmitted data has at least one error bit and at least one status bit, the at least one error bit enabling detection and identification of data transmission errors, and the at least one status bit enabling recognition of an operating state of the at least one inertial sensor.

15. (Currently Amended) The control unit according to claim 14, further comprising:

a serial synchronous interface for providing the data transmission.

16. (Canceled).

17. (Previously Presented) The control unit according to claim 14, wherein the data transmission is configured to be bidirectional.

18. (Previously Presented) The control unit according to claim 14, wherein the data transmission is configured for triggering a sensor test.

19. (Previously Presented) The control unit according to claim 14, wherein the data transmission is configured for triggering a sensor-internal offset regulation of the at least one inertial sensor.

20. (Previously Presented) The control unit according to claim 14, wherein four lines are provided for the data transmission, one of the lines being for selecting the at least one inertial sensor.

21. (Previously Presented) The control unit according to claim 14, wherein the at least one inertial sensor has a multi-channel design.

22. (Previously Presented) The control unit according to claim 14, wherein the data transmission is configured for triggering a switch-over from one operating state to another operating state of the at least one inertial sensor.

23. (Previously Presented) The control unit according to claim 14, wherein the control unit is part of a restraint system.

24. (Previously Presented) The control unit according to claim 14, wherein the control unit is part of a vehicle dynamics control system.

25. (Previously Presented) The control unit according to claim 14, wherein the control unit is part of one of a sensor box and a sensor cluster.

26. (Previously Presented) The control unit according to claim 14, wherein the control unit is part of a vehicle navigation system.

27. (Canceled).

28. (Previously Presented) The control unit according to claim 14, wherein the status bit indicates a running sensor test.

29. (Previously Presented) The control unit according to claim 14, wherein the status bit indicates an offset regulation mode.

30. (New) The control unit according to claim 14, further comprising:
a serial synchronous interface for providing the data transmission;
wherein the data transmission is configured for at least one of the following: (i) to be bidirectional, (ii) triggering a sensor test, (iii) triggering a sensor-internal offset regulation of the at least one inertial sensor, (iv) triggering a switch-over from one operating state to another operating state of the at least one inertial sensor,
wherein four lines are provided for the data transmission, one of the lines being for selecting the at least one inertial sensor,
wherein the at least one inertial sensor has a multi-channel design, and
wherein the status bit indicates one of (i) a running sensor test, (ii) an offset regulation mode, and (iii) an initialization phase.
31. (New) The control unit according to claim 30, wherein the control unit is part of a restraint system.
32. (New) The control unit according to claim 30, wherein the control unit is part of a vehicle dynamics control system.
33. (New) The control unit according to claim 30, wherein the control unit is part of one of a sensor box and a sensor cluster.
34. (New) The control unit according to claim 30, wherein the control unit is part of a vehicle navigation system.